



Press backgrounder

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Species dependent on ancient and frontier forest

Ancient forests are those forests which have been shaped largely by natural events and which are little impacted by human activities; frontier forests are those tracts of ancient forest which are large enough to sustain viable populations of all native plant and animal life.

Species dependent on forests worldwide

Forests of all types cover around 22 percent of the Earth's land surface – these include planted forests, small fragments of ancient forest and frontier forests. As a whole, the world's forests are estimated to contain between 50 and 90 percent of terrestrial species, but most of these are found specifically in frontier and ancient forests – especially those in the tropics. Indeed, while covering only 7 percent of the Earth's land surface, tropical forests support more than 60 percent of its vascular plants and over 50 percent of its vertebrates.

The Washington-based World Resources Institute (WRI) has published the following estimates for numbers of species in tropical forests:

	Higher plants	Vertebrate animals
neotropics (forest)	86,000	1,300
afrotropics (forest)	30,000	400
tropical Asia (forest)	45,000	900
World total (not just forest)	250,000	2,600

Of countries covered in Greenpeace's recent report *Buying Destruction*, WRI estimate that the frontier forests of Brazil alone support 36,000 species of higher plant; those of Indonesia support 18,000 and those of PNG, 7,000.

Many of the plant and animal species found in ancient forests are endemic to a particular region. That is to say that they are found only in that region alone. For example, Defensores del Bosque Chileno report scientists' estimates that as much as 90 percent of plant and animal species in Chile's forests may be endemic. West Africa's largest mountain, Mount Cameroon, supports some 4,000 species of higher plant, 50 of which are endemic. This unique vegetation in turn supports numerous endemic animals including several primates and birds as well as the highly endangered forest elephant. Meanwhile, the ancient temperate rainforests of Princess Royal Island south of Prince Rupert in Canada's British Columbia support the world's only populations of kermode bears.

Loss of vital ancient and frontier forest habitats therefore spells trouble for countless

plants and animals which depend on these unique ecosystems. At the moment, major threats to ancient and frontier forest include logging, mining, roads and other infrastructure, conversion to agriculture and excessive removal of vegetation. Of these, logging is the most important globally, affecting 72 percent of threatened frontier forest, compared to 38 percent (mining, roads and other infrastructure) 20 percent (agricultural clearing) and 14 percent (vegetation removal). A further 13 percent is threatened by ‘other’ activities according to the WRI.

Species currently threatened by logging

According the Worldwide Fund for Nature (WWF) one tenth of the world’s trees are threatened with extinction. This source estimates that 77 tree species have already been lost this century, and that many more are threatened by logging, conversion to agriculture and development of settlements.

Timber species

One of the most obvious groups of species to be threatened by logging are the timber species themselves. Already, of 25 tree species listed in Convention on International Trade in Endangered Species (CITES), appendices I to III, 17 are timber species, including alerce (*Fitzroya cupressoides*) assamela/afroformosa (*Pericopsis elata*) and mahogany (*Swietenia* spp).

Timber species which are CITES listed (those in bold are mentioned in Buying Destruction):

Appendix I	Appendix II	Appendix III
<i>Fitzroya cupressoides</i>	<i>Araucaria araucana*</i>	<i>Swietenia macrophylla</i>
<i>Pilgerodendron uviferum</i>	<i>Caryocar costaricense</i>	
<i>Dalbergia nigra</i>	<i>Oreomunnea pterocarpa</i>	
<i>Abies guatemalensis</i>	<i>Pericopsis elata</i>	
<i>Balmea stormiae</i>	<i>Platymiscium pleiostachyum</i>	
	<i>Pterocarpus santalinus</i>	
	<i>Swietenia humilis</i>	
	<i>Swietenia mahagoni</i>	
	<i>Prunus africana</i>	
	<i>Guaiacum officinale</i>	
	<i>Guaiacum sanctum</i>	

*Except that from Chile which is listed under Appendix I. Appendix I – includes all species threatened with extinction which are or may be affected by trade. Appendix II – includes species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation. Appendix III - includes all species which any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the co-operation of other Parties in the control of trade. Trade in any specimen of a species listed under CITES Appendices I to III requires an export permit, import permit, certificate of origin or re-export certificate as appropriate. (Source: www.wcmc.org.uk/trees/cites.htm)

Fitzroya cupressoides (alerce) is the second-oldest living species on Earth reaching up to 4,000 years of age. It is protected as a national monument in Chile, but there continue to be cases of illegal logging, the species providing timber of exceptional quality.

Pericopsis elata (afroformosa, assamela) is the only African timber species which is

currently CITES listed. In June 1999 an illegal shipment of afrormosia was imported by the Belgian company Vandecasteele Houtimport. Alerted by Greenpeace, Belgium's ministry of Agriculture confiscated the logs.

Swietenia spp (mahogany) Providing highly valued timber, various species of mahogany have been selectively logged on a massive scale, with mahogany hunters opening more than 3,000 km of logging roads in the Brazilian state of Pará alone. However, mahogany seedlings cannot grow under remaining forest cover so that harvested trees are rarely replaced, even where replanting has been tried.

Although not CITES listed, another timber species mentioned in *Buying Destruction*, which is also in trouble due to over-exploitation is *Intsia bijuga* (kwila) one of the most valuable timbers of South East Asia. According to the World Conservation Monitoring Centre (WCMC), the species has been exploited so intensively for timber that in most countries few trees are left in natural stands. It has been recorded as "threatened" in Indonesia, "vulnerable" in the Philippines and is considered to be almost extinct in Sabah. Many other species are facing similar depletion due to unsustainable harvesting to feed growing timber demands worldwide.

Animal species

Logging is posing a serious threat to many animals and birds, largely due to loss of habitat and the opening up of forest to commercial hunting of bushmeats including apes.

In Indonesia, remaining populations of orangutans (*Pongo pygmaeus*) are threatened by logging, illegal log extraction and subsequent poaching taking orangutans to the risk of extinction. In addition, the World Wide Fund for Nature (WWF) have reported that the forest fires of 1997 and 1998 (which are closely linked to the activities of the logging industry) have resulted in the deaths of many orangutans.

In Gabon, the Wildlife Conservation Society has reported that logging in tropical forests has triggered savage territorial wars among chimpanzees, in which 4/5 of the chimps die. Meanwhile in many parts of the Congo basin, including Cameroon, trade in bushmeat – including that of gorillas – has increased massively with demands to feed the logging companies' workforce. In this expanding bushmeat trade, commercial hunters use logging roads and even logging vehicles to poach for bushmeat in the newly opened forests. Both chimpanzees (*Pan* spp) and gorillas (*Gorilla gorilla*) are listed in CITES Appendix I – ie: both species are threatened with extinction which is or may be affected by trade.

Sources:

Collins Atlas of the World (New Edition), Harper Collins, London (1991)
The last frontier forests: ecosystems and economies on the edge, World Resources Institute, Washington (1997)
Trees on the verge of mass extinction. New Scientist (29.08.98)
New York Times (13.05.97)

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